

AMSAT News Service Weekly Bulletins

Issue: ANS-083

Date: 2008-03-23

Sources: amsat-ans-2008-ans-083-weekly.txt

AMSAT NEWS SERVICE

ANS-083

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:

- * AMSAT Notes Passing of Arthur C. Clarke
- * AO-51 Schedule Update - Dual Repeater Mode March 24-31
- * College Satellite Night March 27 on AO-51
- * GO-32 Satellite Carried Digital Messaging in Hospital Drill
- * AMSAT-DC Meeting Recap
- * OSCAR-11 Celebrates 24th Birthday
- * NASA Award for VK5ZAI
- * Satellite Shorts From All Over
- * ARISS Status Report for the week of March 17, 2008
- * Black Hole RF Signatures at 29-47 MHz

SB SAT @ AMSAT \$ANS-083.01

AMSAT Notes Passing of Arthur C. Clarke

AMSAT News Service Bulletin 083.01

>From AMSAT HQ SILVER SPRING, MD.

March 23, 2008

To All RADIO AMATEURS

BID: \$ANS-083.01

This week marked the passing of Arthur C. Clarke, author of more than 100 published books in which he foresaw the future of technology, promoted the possibilities of human innovation and exploration and combined these with the ability to explain these to non-scientific readers.

The most famous example is from 1945, when he first proposed the idea of communications satellites that could be based in geostationary orbits, which keep satellites in a fixed position relative to the ground.

Tom Clark, K3IO recalled, "You might be interested in knowing that Arthur was an AMSAT Life Member. His member number, quite fittingly, was LM-2001."

Tom continued, "In the 1970's and 80's, Arthur was a frequent visitor to NASA. He was listed in the Goddard phone director as a consultant in the LANDSAT group, and he also served as a consultant at NASA HQ. In the early 1980's (when I was AMSAT President), on a trip to Washington, Dick Daniels (W4PUJ), Jan King (W3GEY) and I made the presentation of honorary AMSAT LM-2001 to Arthur. He was most appreciative and spent a couple of hours talking with us about our being the "Wright Brothers" of the satellite world, building satellites in our basements and garages."

Arthur communicated with us several times in the years following that visit. He asked that his LM-2001 Journal subscription be sent in his name to a library in Sri Lanka.

[ANS thanks Tom, K3IO and the Washington Post for the above information]

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SB SAT @ AMSAT \$ANS-083.02
A0-51 Schedule Update - Dual Repeater Mode March 24-31

AMSAT News Service Bulletin 083.02
>From AMSAT HQ SILVER SPRING, MD.
March 23, 2008
To All RADIO AMATEURS
BID: \$ANS-083.02

A0-51 will be in dual V/U repeater mode the week of March 24 - 31.
Take advantage of the much less crowded second repeater. On
Thursday, March 27, please attempt to contact the active University
stations.

FM Repeater, V/U
Uplink: 145.920 MHz FM, NO PL Tone
Downlink: 435.300 MHz FM

FM Repeater, V/U (March 27th please yield to university stations)
Uplink: 145.880 MHz FM, NO PL Tone
Downlink: 435.150 MHz FM

On Wed morning March 26, the second repeater will be off for testing
during a portion of the morning passes.

[ANS thanks Gould, WA4SXM, A0-51 Control Station for the above
information]

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SB SAT @ AMSAT \$ANS-083.03
College Satellite Night March 27 on A0-51

AMSAT News Service Bulletin 083.03
>From AMSAT HQ SILVER SPRING, MD.
March 23, 2008
To All RADIO AMATEURS
BID: \$ANS-083.03

College Satellite Night will be held Thursday March 27, 2008 (local
time). AMSAT Operations is supporting this event by dedicating a
second repeater onboard A0-51 to college operations only for this
date. Previous events have had the colleges well represented on the
air.

This event is a great opportunity for hams who are satellite active
to interact with existing college operators and/or to elmer a new
generation!

Do you know a college student who would find amateur satellites
interesting and intellectually challenging? Have them as a guest
at your station and introduce them to amateur radio in a way they
will never forget.

AMSAT has a dedicated orbiting repeater set aside for the evening on satellite A051 for this event:

Uplink: 145.880 MHz FM, NO PL Tone
Downlink: 435.150 MHz FM.

Even if you are not set-up for transmission please listen in. You can find satellite pass information for the evening at:
<http://www.amsat.org/amsat-new/tools/predict/>

Hope to see you on the birds!

[ANS thanks Drew, K04MA, AMSAT-VP Operations and Dr. Jay Garlitz, AA4FL for the above information]

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SB SAT @ AMSAT \$ANS-083.04
G0-32 Satellite Carried Digital Messaging in Hospital Drill

AMSAT News Service Bulletin 083.04
>From AMSAT HQ SILVER SPRING, MD.
March 23, 2008
To All RADIO AMATEURS
BID: \$ANS-083.04

On March 12 Shands hospital in Gainesville, FL conducted a simulated emergency communications drill. Students and faculty with the Gator Amateur Radio Club at the University of Florida participated.

The University of Florida Dental School club station, W4DFU, used their satellite ground station to distribute an e-mail test message though the G0-32 amateur radio satellite. This provided proof of concept in a disaster scenario to augment Amateur Radio voice communication if phone and internet services were down.

Keeping patient privacy laws in mind (HIPAA restrictions) they could not transmit sensitive personal or health related data via this mode. However, in support of the larger disaster scenario the satellite e-mail concept could be useful for getting list of supplies, reporting hazardous situations, and status reports.

A copy of the test message, sent entirely via G0-32, is included below as an example of the capability revealed by the Gator Amateur Radio Club:

>From: W4DFU
To: ALL
>Subject: test March 12th, your input
Keywords:

To : ALL
>From: W4DFU
Time: 124227UTC
Date: 12 Mar 2008

Hello All,

W4DFU, the club station of the University of Florida
<http://www.gatorradio.org>, is located at the University's
Health Center which is part of the UF
Shands Hospital complex (<http://www.shands.org/hospitals/uf/>).

Our club is involved today in a test of emergency communication at the hospital and we are sending this message as part of that effort. Please respond to our message and tell us where you are located and if you think G032 and its group of users have emergency potential for relaying information in times of disaster where the Internet may not be available locally...and in which ways this could be of benefit where emergency voice communication could not...

Yours in public service through Amateur Radio

Dr. Jay Garlitz, AA4FL faculty advisor and trustee
Jeff Capehart, W4UFL, club station and repeater manager
Seth McNeill, N6WPV, club secretary
mcnese@ufl.edu

[ANS thanks Dr. Jay Garlitz, AA4FL and the Gator Amateur Radio Club at the University of Florida for the above information]

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SB SAT @ AMSAT \$ANS-083.05
AMSAT-DC Meeting Recap

AMSAT News Service Bulletin 083.05
>From AMSAT HQ SILVER SPRING, MD.
March 23, 2008
To All RADIO AMATEURS
BID: \$ANS-083.05

AT ONE OF THE MOST INSPIRING annual local meetings to date, east coast AMSAT members learned how exciting and substantial the coming months will be as far as participating in experiments using Amateur Radio go in the stratosphere, in space, in workshops, in the public squares and in classrooms. Don't miss out on the good opportunities approaching. The time is NOW for you to start planning and practicing. Come, join the fun!

The <http://patkilroy.com/amsat-dc/> web page is in the process of being updated with pictures here taken at the meeting by Art W4ART, Charlie K3VDB, and others as they come in, as well as notes taken by Bruce WA3SWJ, and various impressions offered by several others who attended.

We will recognize several contributing individuals by name soon!

THANK YOU to the presenters, to those who brought hardware for our hi-tech show 'n' tell, to those who helped publicize the event, to those who shared Pot Luck or munchie items, and those who helped with the room set up and strike. It was fun! You made this gathering inspiring and educational. You made this gathering one to remember!

[ANS thanks AMSAT Mid-Atlantic Metro-DC Area Coordinator Pat Kilroy, N8PK for the above information]

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SB SAT @ AMSAT \$ANS-083.06
OSCAR-11 Celebrates 24th Birthday

AMSAT News Service Bulletin 083.06
>From AMSAT HQ SILVER SPRING, MD.

March 23, 2008
To All RADIO AMATEURS
BID: \$ANS-083.06

Clive, G3CWV noted, "OSCAR-11 celebrated its 24th birthday on 01 March 2008. It was designed, built and launched, within a time scale of six months, using commercially available components. Congratulations to Professor Sir Martin Sweeting G3YJ0, his team at the University of Surrey and associated groups of radio amateurs, for their magnificent achievement."

Signal reports received from Peter ZL3TC, Mark KU7Z, John KB2HSH, Antonio EA1CXG, Edward BX1AD and Andrew VK5LAC indicate great variability in strength: sometimes very strong, sometimes undetectable, even at high elevations. Low signal strength was particularly noticeable at AOS and LOS.

The satellite is now in continuous sunlight, and this is expected to continue until mid March, when eclipses will start again. Unfortunately eclipses will then become a permanent feature of the orbit, which is likely to prevent any periods of sustained operation after March.

Listen for OSCAR-11's AFSK FM ASCII Telemetry on 145.826 MHz.

Refer to <http://www.users.zetnet.co.uk/clivew/> for additional information.

[ANS thanks Clive, G3CWV for the above information]

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SB SAT @ AMSAT \$ANS-083.07
NASA Award for VK5ZAI

AMSAT News Service Bulletin 083.07
>From AMSAT HQ SILVER SPRING, MD.
March 23, 2008
To All RADIO AMATEURS
BID: \$ANS-083.07

Congratulations are in order for Tony Hutchison VK5ZAI.

Known around the world for his involvement in facilitating amateur radio communications with orbiting space stations is Tony Hutchison VK5ZAI, who has just received a well deserved achievement award.

Tony is the Australian coordinator of the Amateur Radio on the International Space Station (ARISS) project is now the proud but humble recipient of a Group Achievement Award from NASA's Lyndon B. Johnson Space Centre in Houston Texas.

The citation on the award certificate is "For providing sustained outstanding engineering support which has resulted in a record number of successful ISS amateur radio contacts", and signed by the Johnson Space Centre Director, Michael Coats.

Tony VK5ZAI has for more than 15 years given many schools and groups the opportunity to talk with space station crew. A notable occasion was the Australian Scout Jamboree in January 2007 as part of the world scouting movement's centenary.

His involvement began in 1993 by assisted South Australia's Loxton

High School students talk with Cosmonaut Alex Serabrov on the MIR space station.

In 1998 Tony handled most of the communications between Australian-born Astronaut Andy Thomas VK5MIR and his family during his flight on MIR.

Soon after he was invited to be one of nine-approved ARISS telebridge stations and began handling most of the private family contacts for the first three crews on the International Space Station, along with school contacts.

Tony has been involved in linking with school in many countries, and the development of IRLP and Echolink for ARISS contacts, plus the design of interface units used for ARISS telebridge contacts in Australia and Europe.

[ANS thanks Jim Linton, VK3PC and Amateur Radio Newsline 1597 for the above information]

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SB SAT @ AMSAT \$ANS-083.08
Satellite Shorts From All Over

AMSAT News Service Bulletin 083.08
>From AMSAT HQ SILVER SPRING, MD.
March 23, 2008
To All RADIO AMATEURS
BID: \$ANS-083.08

- + AMSAT Field Day rules have been uploaded to:
<http://www.amsat.org/amsat-new/awards/amsatfd.php>
They will appear in the next issue of the AMSAT Journal.
Field Day will be June 28/29, 2008. Start preparing your Field Day stations and offer assistance to local clubs in assembling a station and instruct them in the best ways to operate the satellites.
- + We are moving the AMSAT Store to our own server in the AMSAT Office to give us more control over its operation. Rick Hambly, W2GPS and Dan Briner, AB3EN are working on getting the server, getting additional high speed lines into the office and getting the server software operational and tested. Martha will be back in the office on Wednesday March 25 to take any orders. We are looking at interim store solutions until our own AMSAT Store is operational in a few weeks.
- + AMSAT at the 2008 Dayton Hamvention! We are looking forward to participating in the 2008 Dayton Hamvention. We will be in our regular location right across from the ARRL area, plus we will have an additional booth space. We have a great lineup of speakers for the Saturday morning forum, final list to be released very soon. Bob McGwier, N4HY and his engineering team have promised us a great many new pieces of operational satellite hardware. Bob Davis, KF4KSS is building a full size Eagle space frame that will be at Dayton. An operational SDX that will be used in both SuitSat-2 and the HASP (High Altitude Student Platform)

balloon

project this summer. We are also looking at a terrestrial deployment of this transponder. We will also have a well equipped satellite demonstration area right outside the Ball Arena entrance operating all the amateur satellites passes Friday through Sunday. The AMSAT/TAPR

Banquet

will be Friday night at the Kohler Banquet Center. Menu and reservation information will be available in the next week or two. More information to follow.

+ Paul, VP9MU has released a general c/c++ astrodynamics library which includes basic astronomy routines. Next up will be the orbit propagators, and tracking routines. See:
<http://homepage.mac.com/pclwillmott/GAL/index.html>

+ Ben, N1WBV has released a guide focusing on etiquette and operational guidelines for single-channel FM satellites:
PDF (35K) http://www.innismir.net/etc/CourteousA051_v1.1.pdf
DOC (38K) http://www.innismir.net/etc/CourteousA051_v1.1.doc

+ The 34th Annual Eastern VHF-UHF Conference and Dinner Banquet will be held on April 18, 19 & 20th, 2008 at the Crowne Plaza Hotel in Enfield, CT. Please see the site for further information:
<http://www.newsvhf.com/vhfconf.html>

+ Clint, K6LCS invites readers to download and print out his 4-page tutorial, "Working Ham Sats with Your HT". If you have a print utility that makes brochures, you can get it all on one page, duplex printing. See:
<http://homepage.mac.com/clintbradford/FileSharing1.html>

[ANS thanks everyone for the above information]

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SB SAT @ AMSAT \$ANS-083.09

ARISS Status Report for the week of March 17, 2008

AMSAT News Service Bulletin 083.09

>From AMSAT HQ SILVER SPRING, MD.

March 23, 2008

To All RADIO AMATEURS

BID: \$ANS-083.09

1. Upcoming School Contact

The Non Profit Organization Kodomo Support Project in Kyoto, Japan has been approved for an ARISS contact on Wednesday, March 26. The Project was established in 2006 to provide a network for parents and the community to support the social, mental and physical education of children. Participants will learn about wireless communication, space and science technology.

2. Lycee mixte Reni $\frac{1}{2}$ Gosse Contact Successful

On Monday, March 10, students at Lycee mixte Reni $\frac{1}{2}$ Gosse in Clermont L'Herault, France participated in an ARISS contact. The scheduled contact at 08:32 UTC did not take place due to Eyharts $\frac{1}{2}$ work responsibilities. A request to reschedule the contact for the next orbit was made and the ARISS team quickly responded, setting up a telebridge

station between Clermont l'Herault and Kingston, Australia. This second attempt was successful. Nine students were able to ask one question each of the astronaut. Approximately 50 students, ten teachers and more than 75 amateur radio operators were present. Audio was fed into the EchoLink server. Three regional and local newspapers covered the event, as well as 3 television broadcast stations.

3. Astronaut Training Status

On Thursday, March 13, an ARISS training session was held with Nicole Stott, KE5GJN, and Sandra Magnus, KE5FYE. Both astronauts successfully participated in terrestrial-based amateur radio contacts using ARISS-equivalent equipment with a Houston area school, Westbrook Intermediate.

An ARISS training session has been planned in late April for Canadian Space Agency astronaut Bob Thirsk, VA3CSA, and European Space Agency astronaut Frank DeWinne, ON1DWN.

4. Spaceflight Participant Receives Training on Amateur Radio

Richard Garriott, W5KWQ, will fly to the ISS in October 2008 as a spaceflight participant. He has received Russian training on the ARISS radio equipment and has posted an update covering this to his blog on his [Richard in Space](http://www.richardinspace.com/index.cfm?fuseaction=blog.welcome) Web site (February 26 entries). See: <http://www.richardinspace.com/index.cfm?fuseaction=blog.welcome>

5. ARISS Presentation Posted

Patricia Palazzolo, KB3NMS, a teacher at Upper St. Clair School in Pennsylvania, gave a presentation at the Radio Amateur Satellite Corporation (AMSAT) Space Symposium held in Pittsburgh in October 2007.

Her presentation, [Launching Dreams: The Long-term Impact of SAREX and ARISS on Student Achievement](http://www.amsat.org/amsat/ariss/Presentations/AMSAT%20Symposiums/2007%20Symposium/Launching%20Dreams.pdf) covered her experiences with her students, the space program, the Shuttle Amateur Radio Experiment (SAREX) program and the ARISS program. She gives real life examples of the positive impact these experiences have had on her children. The presentation has been posted on the AMSAT Web site. See: <http://www.amsat.org/amsat/ariss/Presentations/AMSAT%20Symposiums/2007%20Symposium/Launching%20Dreams.pdf>

[ANS thanks Carol, KB3LKI for the above information]

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SB SAT @ AMSAT \$ANS-083.10
Black Hole RF Signatures at 29-47 MHz

AMSAT News Service Bulletin 083.10
>From AMSAT HQ SILVER SPRING, MD.
March 23, 2008
To All RADIO AMATEURS
BID: \$ANS-083.10

In closing, here is an item to discuss on the 2M repeater drive to work which may be more interesting than traffic, the weather, or the signs and symptoms of a gallbladder attack.

This week the UniverseToday website revealed that radio astronomers may be able to detect the evaporation and death of a primordial black hole by listening for their radio frequency emissions in the 29-47

MHz range.

Primordial black holes are remnants of the Big Bang and they are predicted to be knocking around in our universe right now. If they were 10^{12} kg or bigger at the time of creation, they have enough mass to have survived constant evaporation from Hawking radiation over the 14 billion years since the beginning of the cosmos.

But what happens when the tiny black hole evaporates so small that it becomes so tightly wrapped around the structure of a fifth dimension (other than the "normal" three spatial dimensions and one time dimension)? Well, the black hole will explosively show itself, much like an elastic band snapping, emitting energy. These final moments will signify that the primordial black hole has died. What makes this exciting is that researchers believe they can detect these events as spikes of radio wave emissions and the hunt has already begun.

Interestingly, if their predictions are correct, this could provide evidence for the existence of a fifth dimension, a dimension operating at scales of billionths of a nanometer. If this exotic emission can be received, and if it is corroborated by both antennae, this could be evidence of the string theory prediction that there are more dimensions than the four we currently understand.

The Eight-meter-wavelength Transient Array (ETA) run by Virginia Tech Departments of Electrical & Computer Engineering and Physics, and the Pisgah Astronomical Research Institute (PARI), is currently taking high cadence radio wave observations and has been doing so for the past few months. This basic-looking antenna system, in fields in Montgomery County, North Carolina, giving researchers a unique opportunity to see primordial black holes as they die.

See the full story at:
[http://www.universetoday.com/2008/03/16/when-black-holes-explode-measuring-t
he-emission-from-the-fifth-dimension/](http://www.universetoday.com/2008/03/16/when-black-holes-explode-measuring-t-he-emission-from-the-fifth-dimension/)

[ANS thanks UniverseToday.com for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM